

Abstract

Methods and systems can reduce the spread of computer files or data on a network by obtaining and tracking times of arrival for chunks of data transmitted on the network. The times of arrival for a node can be transformed into time-series and periodograms computed from the time-series. Successive periodograms can be compared to determine changes in the strongest peaks of the periodograms. If a new peak is identified, a search for the occurrence of the peak in previous periodograms can be conducted. If no peak having a matching frequency is found, a search for the peak in the periodograms for neighboring nodes can be performed. If matching peaks are found, the associated data stream can be classified. Predictions of the timing and length of associated data packets can be used to randomly interrupt transmission of associated data packets resulting in reducing the spread of the classified data stream.